AMENDMENTS TO THE CLAIMS

1.-6.   (Canceled)

7.   (Currently Amended)   A method of imaging features onto a wafer comprising:

establishing a grid with m rows in the x-direction and n columns in the y-direction;

arranging a plurality of real features on the grid;

arranging a plurality of assist features <u>at each of the grid points not occupied by the real features</u> ~~on the grid points~~, the assist features being sized such that they do not print but nevertheless create a mask spectrum that allows an illumination to be optimized;

grouping a first subset of features comprising real and assist features <u>at each of the grid points not occupied by the real features</u> located in odd-number rows while in odd-number columns;

grouping a second subset of features comprising real and assist features <u>at each of the grid points not occupied by the real features</u> located in odd-number rows while in even-number columns;

grouping a third subset of features comprising real and assist features <u>at each of the grid points not occupied by the real features</u> located in even-number rows while in odd-number columns;

grouping a fourth subset of features comprising real and assist features <u>at each of the grid points not occupied by the real features</u> located in even-number rows while in even-number columns; and

creating two masks, the first mask including the first and the fourth subsets of features, the second mask containing the second and the third subsets of features, and

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exposing the two masks sequentially and imaging the real features onto the wafer using quadrupole illumination sources with the poles of the quadrupole illuminations placed on the x-axis and the y-axis.

8.   (Canceled)

9.   (Previously Presented)   The method of imaging features according to claim 7, wherein grid pitches, p_x and p_y, are selected to minimize circuit area.

10.   (Original)   The method of imaging features according to claim 7, wherein the assist features are arranged on the grid points that do not have a real feature.

11.   (Canceled)

12.   (Previously Presented)   The method of imaging features onto a wafer according to claim 7, wherein a distance between two adjacent real features is no less than the minimum pitch of single-exposure lithography.

13.-14.   (Canceled)

15.   (Previously Presented)   The lithography method according to claim 7, wherein a diagonal distance between two adjacent features (real or assist features) is no less than the minimum pitch of single-exposure lithography.

16.   (Withdrawn) A mask set for imaging a die comprising:
          a grid with m rows and n columns;
          a plurality of real features on the grid;
          a plurality of assist features on the grid points, the assist features being sized such that they do not print but nevertheless create a mask spectrum that allows an illumination to be optimized;

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a first subset of features comprising real and assist features located in odd-number rows while in odd-number columns;

a second subset of features comprising real and assist features located in odd-number rows while in even-number columns;

a third subset of features comprising real and assist features located in even-number rows while in odd-number columns;

a fourth subset of features comprising real and assist features located in even-number rows while in even-number columns;

a first mask, the first masking having the first and the fourth subsets of features; and

a second mask having the second and the third subsets of features, wherein any two adjacent features (real or assist features) in the first or the second mask are spaced at no less than a minimum pitch for single-exposure lithography wherein the masks are adapted for sequentially imprinting the real features onto the wafer using quadrupole illumination sources with the poles of the quadrupole illuminations placed on an x-axis and a y-axis.

17   (Withdrawn) The mask set according to claim 16, wherein the real features on the first mask and the real features on the second mask create a set of real features for a single die.

18.   (Withdrawn) A mask set for imaging a die according to claim 16, wherein the real features on the first mask are distinct from the real features on the second mask.

19.   (Withdrawn) A mask set for imaging a die according to claim 16, wherein the assist features on the first mask are distinct from the assist features on the second mask.

20.   (Withdrawn) The mask set for imaging a die according to claim 16, wherein a diagonal distance between two neighboring features (real or assist features) is no less than the minimum pitch of single-exposure lithography.

21.-32.   (Canceled)